CLAIMS: What is claimed is:

1. A photodetector, comprising:

a) a pair of diodes formed in common on a shared die;

b) a mask formed integrally with the die.

2. The photodetector of claim 1, wherein:

a) the mask is formed with parallel bars of an opaque material with gaps there between.

3. The photodetector of claim 2, wherein:

a) the parallel bars are formed in two groups, a first group positioned to cover the first diode and a second group positioned to cover the second diode, each group having spaced bars having a distal end, the distal ends of one group being positioned adjacent to a gap between bars of the other group.

4. The photodetector of claim 1, wherein:

a) the mask is formed with a plurality of substantially circular apertures formed therein.

5. The photodetector of claim 1, wherein:

a) the apertures are sized to allow only TEM_{00} light therethrough.

6. The photodetector of claim 1, wherein:

a) the pitch of the parallel lines match the pitch of the birefringent pattern

7. A method of making a masked photodetector, comprising:

a) forming a die with a diode formed therein;

b) placing a photomask on the die to cover a portion of the diode.

8. The method of claim 7, further comprising the steps of:

a) forming the photomask to have a plurality of parallel bars of optically opaque material with a gap formed between bars, the bars and gap having a width.

9. The method of claim 8, further comprising the step of:

a) forming the bars and gap to have a width such that a ratio of the width of a gap to the width of a single bar is between 0.8182 and 1.2222.

10. The method of claim 9, further comprising the step of:

a) forming the bars from a blue chrome material.

11. The method of claim 6, further comprising the step of:

a) forming the mask to have a plurality of apertures therein, one of said apertures being positioned to allow light to reach the diode.

12. The method of claim 11, further comprising the step of:

a) forming the aperture to allow only light having a TEM_{00} to pass therethrough.

13. A ring laser gyro readout detector, comprising:

a) a first photodiode

b) a mask formed in the photodiode for excluding certain wavelengths of light from reaching the photodiode.

14. The ring laser gyro readout of claim 13, wherein the mask further comprises:

a) a plurality of substantially planar, spaced parallel bars formed on the photodiode, the spacing being selected to match the pitch of the birefringent pattern.

15. The ring laser gyro readout of claim 14, further comprising a second photodiode.

16. The ring laser gyro readout of claim 15 wherein the first and second diodes are formed side by side on a die with a central gap therebetween.

17. The ring laser gyro readout of claim 16, wherein the mask covers both diodes.

18. The ring laser gyro readout of claim 17, wherein the bars of the mask are formed in first and second groups, the first group being positioned adjacent to the first photodiode, the second group being positioned adjacent to the second photodiode.

19. The ring laser gyro readout of claim 18, wherein the first and second groups are connected by a mask edge and wherein the bars of each group have a distal end adjacent to the central gap.

20. The ring laser gyro readout of claim 19, wherein the distal end of the bars of the first group are positioned to be adjacent to spaces between bars of the second group.